

A **American Home Assurance Co v Nalin Industries
Sdn Bhd**

B SUPREME COURT (KUALA LUMPUR) — CIVIL APPEAL NO 02-128-1991
ABDUL HAMID OMAR LP, GUNN CHIT TUAN CJ (MALAYA) AND
EUSOFF CHIN SCJ
24 JUNE 1993

C *Insurance — Insurance for plant and machinery — Insurance of steam boiler against risk of loss from any 'accident' as defined in policy — Rupture of coil resulting in plant having to shut down — Whether sudden and accidental breakdown — Whether insurance company liable for losses suffered due to shut down — Onus on respondent to prove that it came under the peril insured against — Onus on appellant to prove that it was not an 'accident' as defined in the policy*

Words and Phrases — 'Accident'

D The respondent operated a plant for the purpose of refining edible palm oil. The plant included a steam boiler ('the boiler') and the respondent had insured its plant and machinery, including the boiler, with the appellant against the risk of loss resulting from any accident as defined in the policy while the said plant and machinery was in operation. On 28 November 1982, a rupture in the upper coil of the boiler caused a leakage of water which resulted in turn in the whole plant being shut down. A new coil had to be ordered from the manufacturers and the plant was only able to start operation again on 21 December 1982. The respondent submitted to the appellant its claim for losses suffered due to the shut down of the operation. The appellant repudiated liability and the respondent issued a writ of summons against the appellant. The High Court held that the appellant was liable to the respondent for the losses under the insurance policy. The appellant has appealed.

G **Held**, dismissing the appeal:

- (1) While it was incumbent on the respondent to establish that the loss it suffered arose out of an accident to an object covered by the policy, the burden was not on the respondent to establish that the event which took place, namely the rupture of the coil, fell within any of the exceptions to the definition of 'accident' in the policy. That onus was on the appellant to prove that the rupture fell under the exception and was therefore not an accident.
- H (2) The word 'accident' does not include any damage which was caused deliberately or intentionally. Therefore, the question was whether the respondent designed or foresaw the bursting of the coil. If it did not, then the accident was within the meaning of the policy. The evidence in court showed that the respondent had followed the manufacturer's operating manual when installing and running the boiler. The accident here was the rupture of the coil. It occurred suddenly and unexpectedly because the coil was
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supposed to last the lifetime of the boiler. Therefore, the accident was within the meaning of the policy.

- (3) The dominant cause of the accident was not corrosion or corrosion fatigue as alleged by the appellant but the lack of feed water in the boiler. The respondent did not intentionally or deliberately add insufficient water into the boiler as they had followed the manufacturer's instruction manual to the letter.

[Bahasa Malaysia summary]

Penentang menjalankan satu loji pembersihan minyak kelapa sawit yang boleh dimakan. Loji itu termasuk sebuah dandang stim ('dandang itu') dan penentang telah menginsuranskan loji dan jenteranya, termasuk dandang itu, dengan perayu terhadap risiko kerugian akibat sebarang kemalangan seperti yang ditakrifkan di dalam polisi insurans itu semasa jentera itu digunakan. Pada 28 November 1982, koil atas dandang itu telah pecah menyebabkan kebocoran air dan seluruh loji itu terpaksa ditutup. Koil yang baru telah dipesan dari pengilangnya dan loji itu hanya dapat mula beroperasi semula pada 21 Disember 1982. Penentang mengemukakan tuntutan kepada perayu bagi kerugian yang dialaminya kerana penutupan loji itu. Perayu menolak liabiliti dan penentang telah mengeluarkan writ saman terhadap perayu. Mahkamah Tinggi memutuskan bahawa perayu bertanggungjawab terhadap penentang untuk kerugian yang dialaminya di bawah polisi insurans itu. Perayu telah membuat rayuan.

Diputuskan, menolak rayuan itu:

- (1) Walaupun penentang mesti menunjukkan bahawa kerugian yang dialaminya berpunca dari suatu kemalangan keatas objek yang dilindungi oleh polisi itu, beban membuktikan tidak terletak di atas penentang untuk menunjukkan bahawa kejadian itu, iaitu kepecahan koil itu, jatuh di bawah sebarang pengecualian kepada tafsiran 'accident' di dalam polisi itu. Beban terletak di atas perayu untuk membuktikan bahawa kepecahan itu jatuh di bawah pengecualian itu dan tidak merupakan suatu kemalangan.
- (2) Perkataan 'accident' tidak melingkungi sebarang kerosakkan yang sengaja dilakukan. Oleh itu, soalnya adalah sama ada penentang telah merancang atau boleh meramalkan kepecahan koil itu. Jika penentang tidak dapat membuat demikian, kemalangan itu jatuh di bawah tafsiran polisi itu. Keterangan di dalam mahkamah menunjukkan bahawa penentang telah mengikut buku panduan pengilang apabila memasang dan menggunakan dandang itu. Kemalangan ini berlaku kerana kepecahan koil itu. Ianya telah berlaku secara tiba-tiba dan tidak dijangka kerana koil itu sepatutnya tahan untuk hayat dandang itu. Oleh itu, kemalangan itu jatuh di bawah tafsiran polisi itu.
- (3) Kemalangan itu bukan disebabkan kakisan atau 'corrosion fatigue' seperti yang dinyatakan oleh perayu tetapi kekurangan air di dalam dandang itu. Penentang tidak dengan sengaja menambah

- A air yang tidak cukup kepada dandang itu kerana mereka benar-benar patuh kepada buku panduan pengilang itu.]

Cases referred to

- B 1 *Regina Fur Co Ltd v Bossom* [1958] 2 Lloyd's Rep 425 (refd)
2 *Fenton v J Thorley & Co Ltd* [1903] AC 443 (refd)
3 *Leyland Shipping Co v Norwich Union Fire Insurance Society* [1918] AC 350 (refd)
4 *Gray & Anor v Barr (Prudential Assurance Co Ltd, Third Party)* [1971] 2 All ER 949; [1971] 2 QB 554; [1971] 2 WLR 1334 (refd)

- C **Appeal from:** Civil Suit No C171 of 1984 (High Court, Kuala Lumpur)

*V Pradhan (N Pathmanathan with him) (Skrine & Co) for the appellant.
Cecil Abraham (Navaratnam with him) (Shearn Delamore & Co) for the respondent.*

- D **Eusoff Chin SCJ** (delivering the grounds of judgment of the court): The respondent operated a plant at PLO/23 Jalan L, Pasir Gudang, Johor, for the purposes of refining edible palm oil. The plant included a steam boiler known as Wanson Vaporax Model 1000 HP Steam Generator (hereinafter referred to as 'the boiler').

- E By a boiler and machinery policy of insurance valid between 1 November 1982 to 31 December 1983, the respondent insured its plant and machinery including the boiler, with the appellant, against the risk of loss resulting from any 'accident' as defined in the policy while the said plant and machinery were in operation.

- F On 28 November 1982, a rupture in the upper coil of the boiler caused a leakage of water which in turn resulted in the whole plant being shut down. The appellant was immediately informed of the failure. Temporary repair work was carried out pending the arrival of a new coil. The plant was started up on 5 December 1982. But on 12 December 1982, the repaired coil failed again when another rupture occurred diametrically opposite the first rupture. The plant was shut down. The new coil arrived from the manufacturers in Belgium on 17 December 1982, and the plant started operation on 21 December 1982.

- G On 5 April 1983, the respondent submitted to the appellant its claim for losses suffered due to the shut down of operation. A series of correspondence, discussions, and meetings between the parties followed. Then by a letter dated 7 November 1983, the appellant repudiated its liability to the respondent. On 23 January 1984, the respondent issued its writ of summons against the appellant.

- H The High Court heard the issue on liability and decided, on 7 March 1991 that the appellant was liable to the respondent for the losses under the insurance policy, and hence this appeal.

I The boiler is of a closed circuit type which means that when a certain quantity of water is filled into the coils of the boiler, it is sealed off, and the

boiler is operated with that same quantity of water throughout its operation. The equipment consists of one double helical coil of low carbon steel enclosed in a cylindrical outer jacket of mild steel plates.

The purpose of the boiler is to generate steam. Once the boiler is started up, or fired, the water in the coils is heated, steam is formed and the steam is passed into another section of the plant called the deodorizer. In the deodorizer, the steam condenses into water and returns to the boiler where the process is repeated. This means that at all times there will be steam generated in the boiler; there will be steam in the deodorizer and there will be water returning to the boiler.

The evidence shows that the respondent had installed the boiler in accordance with the manufacturers' operating manual. The oxygen in the feed water was removed by subjecting it to a vacuum prior to introducing it into the boiler. This process was known as deaerating the system and was an effective method of removing oxygen from water. The recommended amount of water was 285 litres which was about 45 gallons. After the last bursting of the coil, the boiler's manufacturer and suppliers sent their engineers to supervise the repairs. Tests carried out showed that the minimum amount of water required to operate that boiler properly was 200 gallons. However, 210 gallons of water was introduced into the boiler after it was repaired in December 1982, and since then the boiler had been running without any breakdown till the date of hearing in December 1986. Indeed, the learned counsel for the respondent informed us that it is still running without complaint up to the date of the hearing of this appeal, ie for the last 11 years.

The respondent's claim is that the rupture or failure of the coil in the boiler on 28 November 1982 was an accident within the terms of the insurance policy and consequently, the losses suffered as a result of the shut down of the plant are recoverable losses under the insurance policy.

The appellant's defence as pleaded in its statement of defence can be enumerated as follows:

- (i) the failure of the coil was not an 'accident' within the meaning of the insurance policy, and was therefore, not a peril insured against;
- (ii) the failure of the coil comes within the first and second exemptions in the definition of 'accident' in the policy, that is, it was caused by depletion, deterioration, corrosion, or erosion of material and/or wear and tear; and
- (iii) the respondent was in breach of condition 8 of the policy which, read with condition 12, made it a condition precedent that no action would lie unless all reasonable steps to maintain the insured property in efficient working order and condition has first been satisfied.

The memorandum of appeal contains the same three grounds of appeal, but before us, the learned counsel for the appellant did not wish to proceed with ground (iii), ie that the respondent did not maintain the insured property efficiently.

The insurance policy defines 'accident' as follows:

Accident shall mean a sudden and accidental breakdown of the object or a part thereof which manifests itself at the time of its occurrence by physical damage to

- A the object that necessitates repair or replacement of the object or part thereof but accident shall not mean
- (a) depletion, deterioration, *corrosion*, or erosion of material;
 - (b) wear or tear; ...

- B The appellant relies heavily on the evidence of Simon Andrew Cox (DW2) who was the appellant's expert witness in metallurgy who gave his findings based primarily on metal analysis. He had examined the ruptured portion of the coil and found a thick porous layer of magnetite (75–100mm) on the inner surface of the tube. The normal or permissible thickness of magnetite would be 10mm. His conclusion was that oxygen above acceptable level
- C was present in the feed water in the boiler. Although only steam was present at that portion of the coil which ruptured, he was of the view that oxygen together with steam blanketing, thermal stress and water splashing gave rise to corrosion fatigue crack. According to him corrosion fatigue caused the rupture of the coil. DW2 did not deny under cross examination that the coil was manufactured to last for hundreds of years or the life time of the boiler.
- D Nevertheless, it is the appellant's submission that the rupture of the coil was not the result of an accident as defined in the policy.

- E It is of course incumbent on the respondent as the plaintiff to establish that the loss it suffered arose out of an accident to an object covered by the policy. In *Regina Fur Co Ltd v Bossom*,¹ Evershed MR held that the onus of proving that its case fell within the policy, remained at all times with the insured. While this case serves only to reaffirm the trite position that the onus is on the plaintiff to establish that it comes under the peril insured against, the burden is not on the respondent (plaintiff) to establish that the event which took place, namely the rupture of the coil, falls within any of the exceptions to the definition of 'accident' in the policy. That onus is on
- F the appellant to prove that the rupture falls under the exception and was therefore not an accident.

The respondent argued that the definition of accident in the policy consists of three component parts and they are:

- G (i) a sudden and accidental breakdown of the object or part thereof;
- (ii) which manifests itself at the time of its occurrence by physical damage to the object;
- (iii) that necessitates repair or replacement of the object or part thereof.

- H Clearly, items (ii) and (iii) had been satisfied in that the boiler had suffered physical damage in the form of the rupture to its coil, and that the damage necessitated repair or replacement of the coil. The only issue left is whether the rupture of the coil can be described as sudden and accidental breakdown.

- I The learned counsel for the appellant submitted that the cause of the rupture was corrosion fatigue which took about seven months to manifest itself after the boiler was first put into operation. Therefore, it could not be described as 'sudden'.

The respondent's argument is that the court should only be concerned with the sudden manifestation and the accidental nature of the failure.

In *Fenton v ŷ Thorley & Co Ltd*,² the House of Lords held at p 453, per Lindley LJ:

The word 'accident' is not a technical legal term with a clearly defined meaning. Speaking generally, but with reference to legal liabilities, an accident means any *unintended and unexpected* occurrence which produces hurt or loss. But it is often used to denote any unintended and unexpected loss or hurt apart from its cause; and *if the cause is not known* the loss or hurt itself would certainly be called an accident. The word 'accident' is also often used to denote both the cause and the effect, no attempt being made to discriminate between them.

At p 456 of that case, the learned judge dealt with the question of causation:

But if personal injury is caused to a workman, and it arises out of and in the course of an employment to which the Act applies, it appears to me that *prima facie* the Act entitles him to compensation, *but that this inference may be displaced by proof that the injury is attributable to his own serious and wilful misconduct or to some other cause which shews that the injury was not accidental.* (Emphasis added.)

The word 'accident' therefore does not include any damage which is caused deliberately or intentionally. The evidence shows that the ruptured coil was installed in April 1982, that is about seven months prior to the rupture. Even DW2 had agreed that in the absence of fatigue component of the corrosion fatigue mechanism, the coil is expected to last for hundreds of years.

It is the respondent's argument that since the coil was expected to last for at least the life span of the boiler, the rupture of the coil seven months after its installation was an occurrence which was never expected or intended to occur.

The question is therefore: did the respondent design or foresee the bursting of the coil. If it did not, then the accident is within the meaning of the policy. The evidence in court shows that the respondent had followed the manufacturer's operating manual when installing and running the boiler. The accident here is the rupture of the coil. It occurred suddenly and unexpectedly because the coil was supposed to last the lifetime of the boiler.

What caused the coil to burst? The appellant's expert witness said it was caused by corrosion fatigue due to the presence of oxygen in the feed water, while the respondent alleged that even if there was corrosion fatigue it was caused by lack of water in the boiler.

In *Leyland Shipping Co v Norwich Union Fire Insurance Society*,³ the Privy Council dealt with the question of 'proximate' cause as opposed to remote cause of damage. Lord Shaw of Dunfermline stated at p 369:

What does 'proximate' here mean? To treat proximate as if it was the cause which is proximate in time is ... out of the question. The cause which is truly proximate is that which is proximate *in efficiency*. That efficiency may have been preserved although other causes may meantime have sprung up which have yet not destroyed it, or truly impaired it, and it may culminate in a result of which it still remains the *real efficient cause* to which the event can be ascribed. (Emphasis added.)

In *Gray v Barr*⁴ at p 955, Lord Denning MR stated that it had been settled in insurance law that the 'cause' is that which is the effective or dominant cause, of the occurrence, or as it is sometimes put, what is *in substance* the cause, even though it is more remote in point of time, such cause to be determined by common sense.

A On the facts, we find that the coil was made to withstand great pressures from the steam and would last for hundreds of years. It would not burst unless any part of it was weakened. The appellant said that corrosion fatigue caused the coil metal to weaken and burst.

B But what actually caused the corrosion fatigue? We find that it is the build-up of thick porous layer of magnetite on the metal part of the coil which weakened the coil. What then caused this build-up of porous layer of magnetite? Was it the presence of oxygen or the absence of sufficient water in the boiler? The evidence before us clearly shows that it was lack of water in the boiler which largely contributed to the build-up of the porous layer of magnetite. The fact shows that since the introduction of more feed water into the boiler, the coil has continued to function without any mishap. We, therefore, find that the dominant cause of the accident is not corrosion or corrosion fatigue but the lack of feed water in the boiler. We also find that the respondent did not intentionally or deliberately feed insufficient water into the boiler as they had followed the manufacturer's instruction manual to the letter.

D We, therefore, dismiss this appeal with costs.

Appeal dismissed.

Reported by Prof Ahmad Ibrahim

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